

SECRETARY OF DEFENSE WILLIAM J. PERRY
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Working to Transform the System

Interview with Deputy Secretary of Defense William J. Perry

Sea Power Contributing Editor Vincent C. Thomas Jr. met with Deputy Secretary of Defense William J. Perry to discuss DOD plans to meet the post-Cold War/post-BUR (Bottom-Up Review) challenge, in an era of rapidly decreasing defense budgets, of fielding forces equipped to meet a broad spectrum of new but as-yet-undefined military threats in virtually any corner of the world. Following is the transcript of that discussion.

SEA POWER: When you left the Pentagon over 12 years ago, after having had major responsibilities in the research and development and procurement fields, you had been involved in an earlier downsizing of the military. You're now involved in another one. What conditions are different today from the 1970s, particularly with regard to what you have referred to as the "offset strategy"?

PERRY: The offset strategy essentially has achieved its objective, which basically was to use technology to give us an advantage in military capability. It was intended to

be used against the Soviet Union, but in fact it was demonstrated in Desert Storm against Soviet equipment manned and operated by Iraqis. Also, we were not outnumbered in that conflict. Therefore, we achieved a decisive victory, quickly, and with relatively few casualties. So I feel very good about the way the weapon systems we developed under the offset strategy performed. I also feel good about the way the Army and the Air Force, and to a certain extent the Navy, developed the right tactics and doctrines for using them properly.

Today we are looking at a very different kind of threat, and the strategies that worked back in the 1970s and 1980s aren't going to work for the next decade or two. But I do see technology as still being very important to support our strategy for the future. I have mentioned that information technology will be applied in a revolutionary way to the armed forces of the future. It will increase commanders' situation awareness, allowing them to know where they are and where the enemy is. Information technology also will lead to advances in simulation.

And information technology will lead to efficiencies in production and in logistics. I see opportunities for as much improvement in those areas, with the application of information technology, as I saw for the offset strategies in the 1970s.

I was intrigued by a comment you made that the uniformed military today "understands the advantages of technology" better than their predecessors did on your earlier Pentagon tour. What were the shortcomings earlier?

PERRY: Some of the military were important boosters of military technology then. But there was a large degree of skepticism about these precision-guided munitions [PGMs] and other applications of advanced technology. Remember that PGMs were applied in some small way in the Vietnam War and did not perform all that well. That war was very much in our memory in the late 1970s. In the very early stages of introduction, there were reliability problems and problems of maintaining equipment in the field. This experience in the Vietnam War, I think, led to a very natural skepticism on the part of the military.

More generally, there were several issues about depending on advanced technology that concerned the military. Even if a system was potentially effective, would that effectiveness be greatly decreased by the so-called fog of war? Would soldiers have high enough levels of training to use the equipment effectively? How easily could the equipment be maintained?

What I think the military didn't fully understand then was that the new technology was inherently easier to operate and to maintain than electro-mechanical systems. Now the military leaders know that, having used technology in war in Desert Storm and seen that indeed it is easier to operate and maintain. We also have a new generation of very well-trained troops that have demonstrated the ability to operate and take care of this equipment.

Is my understanding correct that you believe the requirements process should be separated from the acquisition process?

PERRY: No, it is not. I always have believed that it is exceedingly important to keep those two linked closely together. And John Deutch [under secretary of defense for acquisition and technology] also feels that way. He has been working very closely with Admiral Jeremiah [Adm. David E. Jeremiah, vice chairman of the Joint Chiefs of Staff] both in the Bottom-Up Review and in the specific weapon systems planning that takes place in the various review boards that we have. If there is anything that I feel strongly about, it is that the requirements process and the acquisition process must be close. You cannot treat them as two separate issues.

You described the application of information technology to battlefield simulation as "a revolution which is just beginning and which will have a profound effect on our R&D process." How?

PERRY: In the design of a new system, we estimate how it will perform and then build models to test it. That is a very expensive and time-consuming process. To the

extent that simulations are good enough to do a lot of that prototyping in the computer, when we finally build a model for field testing, it has a much higher probability of being the right model. Looking a little farther downstream, we can test not only technical parameters, but also can use simulation to learn how that system is going to perform on the battlefield.

It now is possible in simulation not only to vary technical parameters and test the edge of the envelope in the computer, but also to simulate combat conditions. In the past we could not access performance on the battlefield until the system got all the way to the operational test stage. If we discover in operational testing a basic operational fault, we may have wasted years of development time and money. So I think advanced simulation is going to have a revolutionary effect on the way we design our weapon systems.

As I recall, the Bush administration dropped the idea of letting contractors charge the government for independent R&D [IR&D]. But you are now saying that independent R&D, whether on military products or even on commercial products, could be considered overhead expenses. Can you expand on that philosophy?

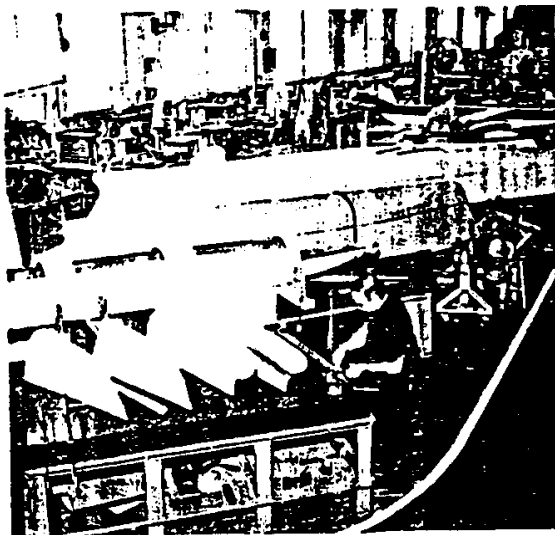
PERRY: There always has been a test for independent R&D. What we are saying now is, if a defense company is diversifying and trying to convert to dual-use products, we should encourage it. We should consider its relevance to maintaining some sort of defense industrial base. So this does not add money to the independent R&D pro-

gram. It simply takes a broader view of what is defense-relevant, to include defense diversification projects.

The percentage of money that a company is able to charge to IR&D is not affected. Indeed, my worry on IR&D is not that we are going to be spending *too much* money, but that we are going to be spending too little since, as production goes down, the base on which they compute the IR&D percentages also goes down.

How can modern information technology improve the shipbuilding industry's competitiveness, particularly since that competitiveness is dependent on so many factors such as block production, improved facilities, improved productivity, etc.?

PERRY: The issues you raise in the question are entirely right. Technology, even manufacturing process technology, is only one element in competitiveness. Our pro-



posal on MARITECH [a program to improve maritime technology to make U.S. shipbuilders and the U.S.-flag Merchant Marine more competitive in the global marketplace] has nothing to do with the other elements. The companies themselves have to pursue improvements in marketing, which obviously is just as important as the other issues involved. But we want MARITECH to encourage the use of information technology to improve the manufacturing process—to reduce the cost of manufacturing. One of the reasons the U.S. shipbuilding industry is not competitive is that their costs are too high.

A second action which the government is taking is working with other nations to try to get a level playing field with regard to subsidization. Even if we get our manufacturing process costs down, if other countries are going to subsidize the building of ships, we still are not going to be competitive. So at least three big issues are involved here. The first is improved marketing on the part of the U.S. shipbuilders. The second is a level playing field on government subsidies. The third, which we do have something to do with, is assisting companies in developing the manufacturing process technology which will reduce their production costs.

We think there will be a big market for ships this coming decade. The question is whether U.S. shipbuilders will be competitive in that market.

How do you propose to remove the barriers that have been created in the last few decades that separate the defense industrial base from the *national* industrial base? And can you give us an example of the kind of barrier you are trying to eliminate?

PERRY: MILSPECs is a very obvious example. Conversion of most of our military specifications to joint military/industrial specifications is very important. We can buy them [many militarily useful products] in the open market.

A second action is getting the authority to procure a much higher percentage of our equipment using basic commercial buying practices instead of the military acquisition system. There are some small contracts where we already have authority to do that; they are contracts under \$25,000. We expect by the first half of next year to have the authority to raise that threshold from \$25,000 to \$100,000.

Congress has to approve that change, doesn't it?

PERRY: Part of the problem is in law, part of the problem is in regulation. The MILSPEC problem is regulation. We don't need congressional assistance on that one. For commercial buying practices, we are substantially restricted by legislation. There are several different pieces of legislation in front of the Congress right now to give us more authority to use commercial buying practices, and I

The Technology Reinvestment Program provides matching funds to industry to "spread technology to companies all over the country," Perry says. This photo shows the hull design facility at the Navy's David Taylor Model Basin, a member of a government-industry team awarded a TRP contract.

believe that they will be picked up in the second session of this Congress.

Is the aviation industrial base a concern to you, now that Grumman, for example, has said that it does not intend to build any more airframes?

PERRY: We have substantial excess capacity in the aircraft industry today, excess to any needs that I can foresee in this decade. Therefore, I do believe that consolidation in the aircraft industry is not only desirable but inevitable. I refer both to the likely size of the commercial airplane market and the defense market. I do not believe that the government has to intervene to actively help business in this area. I believe that these two markets will provide a sufficient base for a healthy, but smaller, aircraft industry.

Second, the industry on its own is evolving toward teaming on the major programs. You have programs like the F-22 [the Air Force's advanced tactical fighter], where you have three major team members. And programs like the F/A-18 [Hornet fighter/attack aircraft], where you have two major team members. I think that while there may be only two new fighter aircraft being developed, and two major production programs, the rest of this decade, those programs will probably support four, five, or six airframe companies. Some of those companies will also be doing work on various R&D efforts under JAST [joint advanced strike technology], for example. So I believe we are going to have a smaller, but still healthy, aircraft industry into the next century without special government intervention.

How, specifically, do you plan to proceed with the JAST program? And how will it differ from the TFX program?

PERRY: It is premature to try to lay out how we are going to approach JAST, except in the broadest terms. But I can answer your TFX question. TFX tried to build a single airplane for the Navy and the Air Force. That ended in failure, and with two different airplanes, one for the Navy and one for the Air Force.

With JAST, we are not trying to build a single airplane for the Navy and the Air Force. What we are planning to do instead is to get commonality in the major subsystems and components that go into the airplane. We envision that the Navy and the Air Force will build separate airplanes. In that respect it is markedly different from the TFX.

There is a second respect in which it is different. Because of the way we are structuring JAST, we are getting strong support from both the Navy and the Air Force for this approach.

How well is the defense industry responding to your efforts to streamline the acquisition process, and where do you stand now?

PERRY: We have a lot to do. First of all, though, John Deutch and I are in complete agreement, not only in the philosophy of what we are trying to do, but in the right way of going about it. There may not be any other instance where the deputy secretary and the under secretary for acquisition worked this closely together.

Second, we both share as a major objective achieving a real degree of acquisition reform, broadly interpreted. We see this as an activity that we are going to be working on all four years. When we leave the Pentagon, we want to leave a legacy of successfully launching acquisition reform. I don't believe you can completely transform the system in just four years, but we can make a very important beginning.

Reducing our reliance on MILSPECs and using commercial buying practices are two very important areas where I fully expect to have demonstrable success by the second or third year. Transforming these acquisition ideas into large system programs will be very much harder to do, but I hope for at least a few successful pilot programs.

I have been using my bully pulpit in this area, and we have gotten a few small things done. But the major thrust to make things happen in acquisition reform will be this year, 1994, when we hope and expect Congress to give us new legislative authority.

You have devoted considerable attention to what you call the Technology Reinvestment Program [TRP]. Can you tell us more about the TRP and why you think it will be so valuable?

PERRY: There are several different components of the Technology Reinvestment Program. Some of the programs are taking technology from defense work and applying it to a commercial product. In these cases, a defense company and a commercial company team up. We provide funds that allow them to get the project started. Others are creating the manufacturing equivalent of the old agriculture extension programs. They set up centers of excellence in various components of manufacturing technology, which can spread new technology to companies all over the country. Large corporations already have pretty good access to the new technology, but the small and medium-sized companies don't.

This is an avenue you are providing them?

PERRY: Yes, but Commerce is really managing the manufacturing extension program. The way to think of it is like the old agricultural extension program which was so successful in the last century and the early part of this century. A lot of new technology was developed in those days to make farming more efficient, but the farmers were spread all over the country. There wasn't a good way of getting that technology to them. The extension program did that.

We are doing the same thing here in these manufacturing extension programs. This is a more appropriate role for the Commerce Department than Defense. Commerce is managing that part of the TRP, but it is using

Defense Department funds from the TRP. Commerce was one of the six agencies that came together to evaluate these programs, and all of the manufacturing extension programs are being turned over to Commerce to actually manage.

Is ARPA [Advanced Research Project Agency] your principal agent in this program?

PERRY: Yes, it is. ARPA is our representative as one of the six agencies that do the total evaluation, and it makes the final determination in this program. The award is made by the director of ARPA.

A major subject of current interest seems to be the theater ballistic missile defense program. How serious is the threat in this area?

PERRY: Theater missile defense is one of our highest national priorities, and it is, I believe, being funded appropriately. The overall level of funding of what used to be the SDI [strategic defense initiative] program, and what is now the BMDO [Ballistic Missile Defense Office], has gone down. We had cut it a small amount, and Congress took it down even farther. But within that, funding for theater missile defense has gone up substantially. Over the five-year defense program, \$12 billion is allocated for theater ballistic missile defense, which is a substantial increase. That is being done primarily at the

expense of space-based systems, and even to a certain degree at the expense of ground-based national systems. So we have put our top priority on theater missile defense and are moving towards the rapid development, manufacturing, and deployment of systems, including ship-based systems.

With regard to ship-based systems, the Aegis system and the Standard missile appear to provide a very good basis for going forward.

PERRY: We believe that the ship-based system is a crucial part of our overall effort. There are some real questions about which of the various theater missile defense programs will be the winners. But there is no doubt that there is going to be a ground-based system and a ship-based system in the final configuration.

During an interview with *Aviation Week & Space Technology* you said the climate now is excellent for getting extensive procurement and acquisition reform through Congress. Why do you think so?

PERRY: First of all, the people with the immediate responsibility for executing it are Colleen Preston [deputy under secretary for acquisition reform], John Deutch, and myself. We really strongly believe in reform, and in its importance. We are committed to succeeding.

Second, the approval chain we have to get things done—the president, the vice president, the secretary—is strongly supporting reform, even to the extent of pushing it harder and faster.

Third, I believe that very important elements of Congress are supporting reform. That does not mean we're not going to have disagreements with Congress. But there are leaders and champions for acquisition reform within Congress, so we have a strong basis with which to overcome any opposition within Congress. Both chairmen of the authorization committees strongly support acquisition reform, and within those committees there are people like Senators Bingaman [Jeff Bingaman (D-N.H.)] and Levin [Carl Levin (D-Mich.)] who will be very much in the forefront of making it happen. I have discussed this in a lot of detail with both Chairman [Sam] Nunn [D-Ga.] and Chairman [Ronald] Dellums [D-Calif.], and I am satisfied that we will have their support.

You paid a recent visit to the *Sea Shadow*, the experimental Navy "stealth" ship that until last year had been pretty much shrouded in secrecy. You initiated that project many years ago. Is the ship that resulted what you thought it would be?

PERRY: Yes and no. The project I initiated in the late 1970s was for a larger ship. I had in mind doing a prototype of a combat ship. After I left the Pentagon, that program was canceled. A new program was started about a year later. But the Navy built a ship that was too small to be a serious prototype of a real combat ship, so in that sense it did not accomplish what I wanted.

On the other hand, it did fully and clearly demonstrate two capabilities that we wanted to demonstrate in a decent-sized ship. One of them was stealth properties. It is exceedingly stealthy in all sensitive elements throughout the ship. This ship is hard to detect.

Second, it has outstanding seakeeping capability. When I was out in San Francisco Bay riding that ship, it was a choppy day, as often happens there; it was sea state 3. The Coast Guard ship which was alongside was bobbing up and down; our ship was riding as though it was in our living room. There was no perceptible movement because of the catamaran nature of the hull. The ship itself sits out of the water. Flotation is maintained by the submarine portions underneath the water, connected to the hull by stilts. The propulsion power is in the platform above the water. Electric power drives the propeller on the submarine portions. That results in a very quiet ship.

Have any of the things that you successfully proved with regard to stealth been applied with any degree of success to follow-on ships such as the Arleigh Burke class of guided missile destroyers [DDGs]?

PERRY: Yes, the Burke class was an important beneficiary. It doesn't get down to true stealth levels, but even a 10- or 20-decibel reduction in a ship's radar cross-section makes it a harder target to detect. You can always see a ship that big; it is not a stealth ship. But if you make a ship 10 to 20 decibels smaller in radar cross section, then the countermeasures which you design to protect it can be 10 to 20 decibels lower in power, and correspondingly smaller and cheaper.

In that respect, if the Navy does come up with another class of DDG to succeed the Burkes, can you apply what you have learned even further?

PERRY: Yes. The Burke was a significant first step, but by no means the last step.

Could you do it even in the next flight of Burkes that comes along?

PERRY: No, I believe that the moves we made in the Burkes will be the last significant steps, until another class of ships comes along. ■